

FIG. 1
PRIOR ART

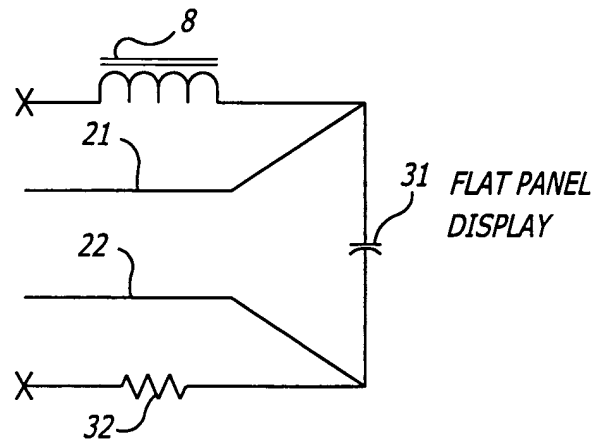


FIG. 3

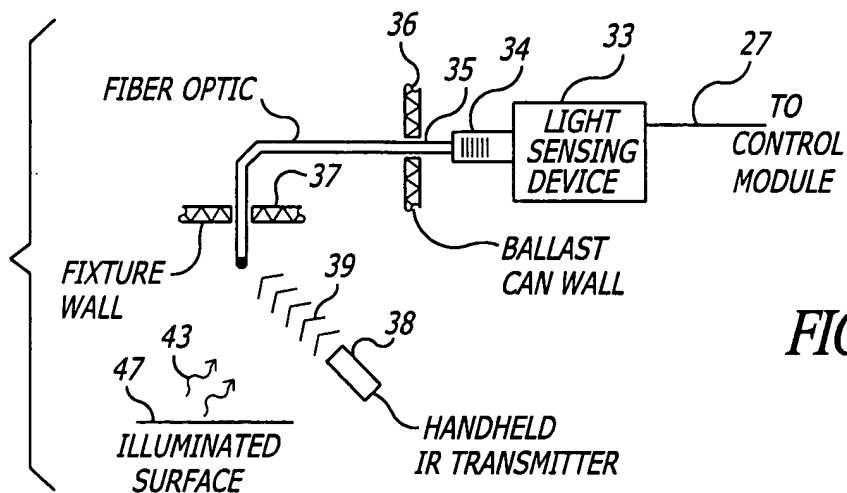


FIG. 5

FIG. 2

The diagram illustrates a power supply system with the following components and connections:

- AC Input:** Two AC line inputs labeled "ACLINE" (1 and 2) are connected to the system.
- Rectification and Conversion:** Input 1 passes through a diode (3) and an "AC TO DC CONVERTER" (4) to produce "+DC" (5). Input 2 passes through a diode (6) to produce "+ISOLATED" (7).
- Regulation and Power Conditioning:** The "+DC" (5) line is connected to a "REGULATOR AND/OR POWER CONDITIONER" (8), which outputs to a "REGULATOR" (9). The "+ISOLATED" (7) line is connected to a "REGULATOR" (10).
- Control and Monitoring:** A "CONTROL MODULE" (11) is connected to the "+DC" (5) line and the "REGULATOR" (9). It also receives input from a "PHOTO CELL" (12) and a "REMOTE CONTROL" (13). The "CONTROL MODULE" (11) is connected to a "LOGIC POWER" (14) source and a "MANUAL (LOCAL) CONTROL" (15).
- Output and Isolation:** The "+ISOLATED" (7) line is connected to a "REGULATOR" (10), which outputs to a "REGULATOR" (11). The output of the "REGULATOR" (11) is connected to a "REGULATOR" (12), which outputs to a "REGULATOR" (13). The output of the "REGULATOR" (13) is connected to a "REGULATOR" (14), which outputs to a "REGULATOR" (15).
- Isolation and Safety:** The system includes several isolation points, including a "REGULATOR" (16) and a "REGULATOR" (17), which are connected to a "REGULATOR" (18) and a "REGULATOR" (19).

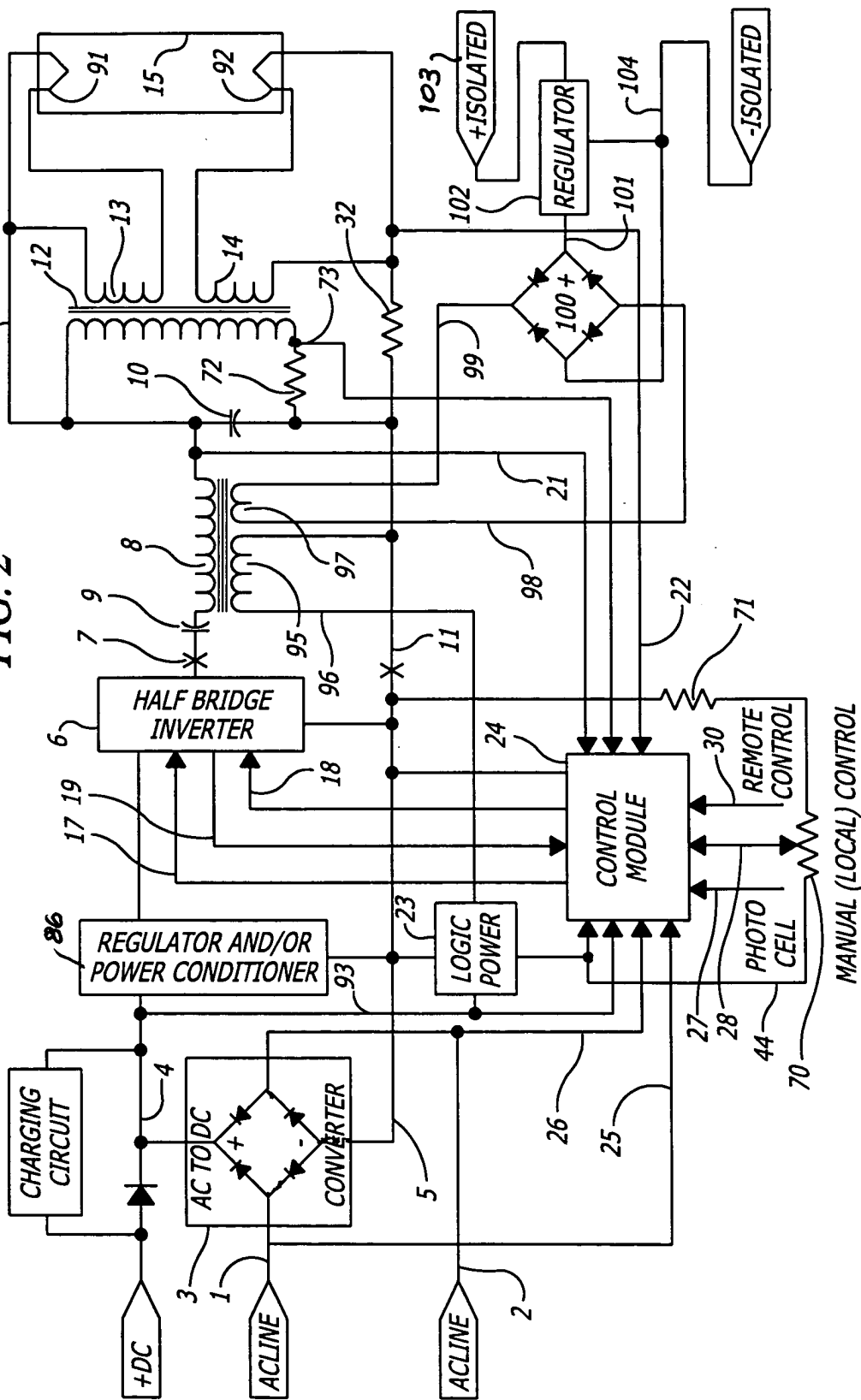


FIG. 4

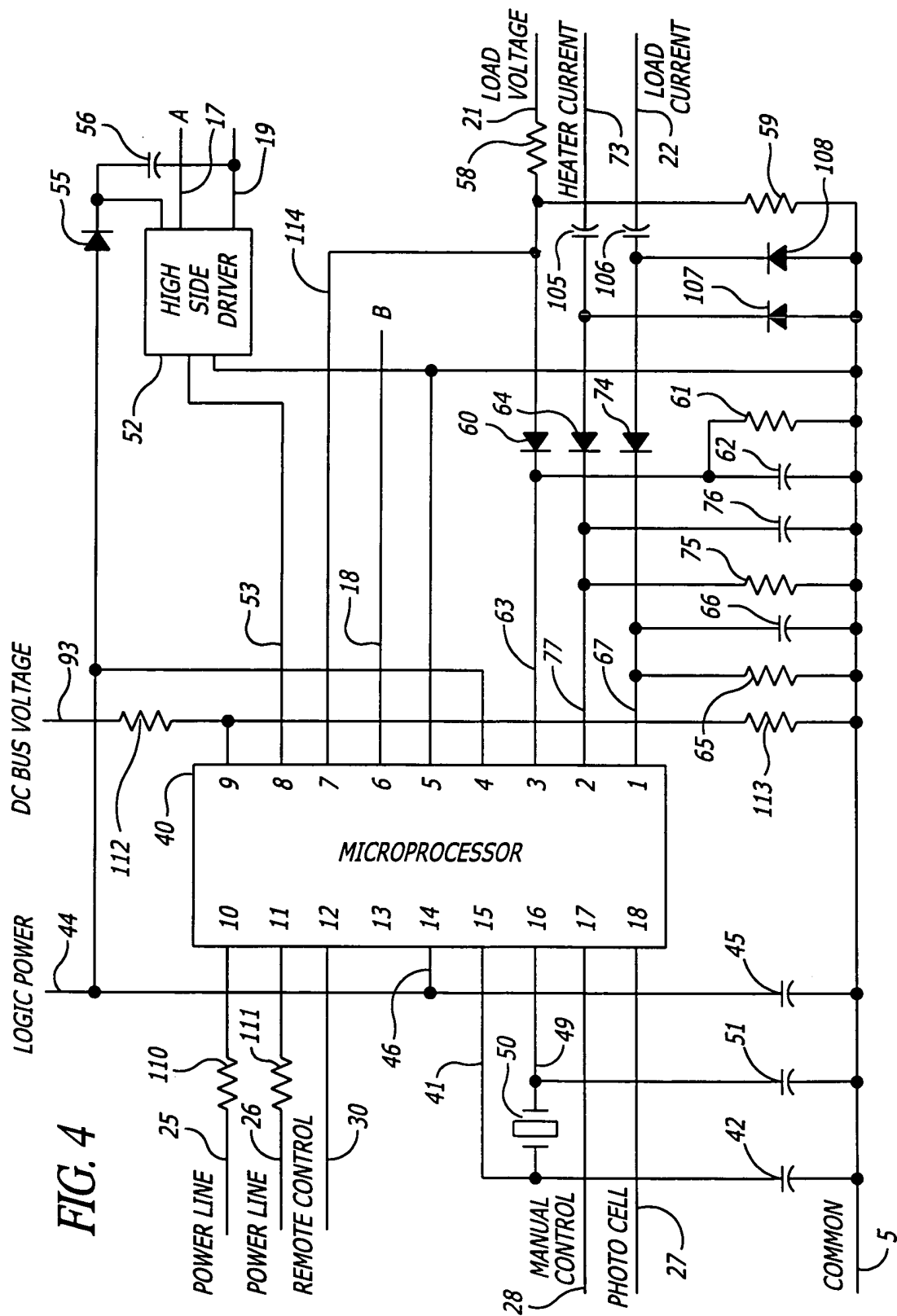


FIG. 6

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graph TD
    Start([POWER ON]) --> Init[INITIALIZE PROCESSOR-HOLD OFF OPERATION TO STABILIZE POWER SUPPLY]
    Init --> StartInvert[START INVERTER AT HIGH FREQUENCY]
    StartInvert --> SweepDown[SWEEP FREQUENCY DOWN TO PRODUCE HEATER WARM-UP VOLTAGE]
    SweepDown --> HeaterOK{HEATER OK?}
    HeaterOK -- yes --> StrikeTimer[SWEEP TO STRIKE AND STRIKE TIMER]
    HeaterOK -- no --> HeaterOK
    StrikeTimer --> Strike{STRIKE?}
    Strike -- yes --> FullOutput[FULL OUTPUT TIMER]
    Strike -- no --> Shutdown[GO TO SHUTDOWN VOLTAGE]
    FullOutput --> RaiseCurrent[RAISE TO DESIRED LAMP CURRENT]
    RaiseCurrent --> HeaterOK2{HEATER OK?}
    HeaterOK2 -- OK --> Temp{TEMP?}
    Temp -- TOO HIGH --> Shutdown
    Temp -- OK --> DetectLamp[DETECT LAMP REPLACEMENT]
    DetectLamp -- HIGH --> Shutdown
    DetectLamp -- LOW --> Temp
    Shutdown --> ShutdownV[SHUT DOWN VOLTAGE]
    ShutdownV --> Temp
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The flowchart illustrates the operational sequence of a lamp system. It begins with a 'POWER ON' event, leading to an initialization phase to stabilize the power supply. The process then enters a frequency sweep to warm up the heater. A decision point checks if the heater is OK; if not, it loops back. Once OK, it proceeds to a strike timer and another decision on whether a strike occurred. If a strike occurs, it enters a full output timer phase, followed by raising the current to the desired level. Another heater OK check is performed. If the heater is OK, it checks the temperature. If too high, it goes to shutdown voltage. If the temperature is low, it proceeds to a lamp replacement detection step. This step checks if the lamp needs replacement (HIGH) or not (LOW). If replacement is needed, it goes to shutdown voltage. If not, it loops back to the temperature check. If no strike occurs, the process goes directly to shutdown voltage.

